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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,092	10/28/2003	Robin Kelley Allen	7191	4726
55740	7590	03/23/2006	EXAMINER	
GAUTHIER & CONNORS, LLP 225 FRANKLIN STREET BOSTON, MA 02110			BRINEY III, WALTER F	
			ART UNIT	PAPER NUMBER
			2615	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/695,092

Applicant(s)

ALLEN, ROBIN KELLEY

Examiner

Walter F. Briney III

Art Unit

2646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 28 October 2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. **Claims 1 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Skulley (US Patent 6,856,690).**

**Claim 10** is limited to “an ear seal for use in a headset.” Skulley discloses a plurality of earphone cushions. See Abstract. In one embodiment seen in figures 6 and 7, a cushion 300 includes a ring 302 is coupled to a second ring 330, thereby forming “an ear seal” as recited. The ring 302 defines an “outer annular surface” while the second ring 330 defines an “inner annular surface.” The fact that the cushion 300 is annular means it inherently has an annular width and thickness. Skulley discloses that ring 302 comprises an elastomeric foam material with microcapsules of phase change material. The phase change material corresponds to the “thermal energy storage material.” See column 5, lines 26-65.

**Claim 1** recites essentially the same limitations as claim 10, and is rejected for the same reasons.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 2. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US Patent Application Publication 2003/0190049) in view of Skulley (US Patent 6,856,690).**

**Claim 1** is limited to "an ear seal for use in a headset." Kim discloses a headphone accessory. See Abstract. In the exploded view of figure 2, Kim depicts the headphone accessory comprising elements 30, 70A and 80. Figure 4 depicts the cross section of the assembled accessory as coupled to an enclosure 20 that makes up, in part, the headset of figures 1A and 1B. The accessory corresponds to "an ear seal for use in a headset." The section of element 30 that couples with enclosure 20 corresponds to "an inner annular surface" as recited. The ring 80 corresponds to the "outer annular surface" as recited. In one embodiment, element 70A comprises a hollow tube 77 and a medium 78 that functions to maintain a desired temperature. See paragraph 37. Based on Kim's disclosure, however, this medium is not necessarily a "thermal storage medium" as recited. However, this deficiency is overcome by an obvious modification.

While Kim discloses a particular type of cool/warm pack, the Utility Models referred to in paragraph 37 cannot be found. Essentially, Kim is silent regarding the type of medium 78 to use in providing a cool/warm pack. However, phase change

materials are well known to provide the cool/warm pack effect, particularly in earphone cushions. See Skulley Abstract and column 1, line 66, through column 2, line 10.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use phase change materials as taught by Skulley to provide a cool/warm pack simply because Kim is silent regarding what medium to use to provide a cool/warm pack.

**Claim 2** is limited to “the ear seal as claimed in claim 1,” as covered by Kim in view of Skulley. As noted in the rejection of claim 1, Skulley teaches the use of phase change materials in providing endothermic/exothermic temperature maintenance. See Abstract. This is the essential property of paraffin wax made of use in the instantly claimed invention, and as such, the materials taught by Skulley correspond to paraffin wax-like material claimed. Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 3** is limited to “the ear seal as claimed in claim 1,” as covered by Kim in view of Skulley. With reference to Kim figure 10, a cover 90 is provided to wrap the medium 78 that contains the thermal storage medium. The cover 90 is either cotton or wool, and as such, corresponds to “a flexible sheath.” See paragraph 38. Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 4** is limited to “the ear seal as claimed in claim 1,” as covered by Kim in view of Skulley. With reference to Skulley, a cool/warm pack comprises a foamed elastomer incorporating microcapsules of a proprietary phase change material. See column 1, line 66, through column 2, line 10. In this way, the phase change material is

"dispersed within a flexible foam matrix." Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 5** is limited to "the ear seal as claimed in claim 4," as covered by Kim in view of Skulley. As seen in figure 2 of Kim, the ring 70 makes up most of the width of the ear seal, making the flexible foam matrix material that composes the majority of ring 70 "relatively wide with respect to a width of the ear seal." Figure 4 indicates that the ring 70 makes up slightly less than all of the thickness of the ear seal, making the flexible foam matrix "relatively thin with respect to a thickness of the ear seal." Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 6** is limited to "the ear seal as claimed in claim 4," as covered by Kim in view of Skulley. With reference to figure 9 of Kim notice that the foam matrix 78 (as taught by Skulley) is slightly thinner in diameter than the outer shell 77. Now notice that in figure 4, the outer diameter of ring 70 is coplanar with the outer annular surface. This necessitates that "said flexible foam matrix material is inset from said outer annular surface of said ear seal." Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 7** is limited to "the ear seal as claimed in claim 4," as covered by Kim in view of Skulley. With reference to figure 9 of Kim notice that the foam matrix 78 (as taught by Skulley) is slightly thinner in diameter than the outer shell 77. Now notice that in figure 4, the outer diameter of ring 70 is coplanar with the outer annular surface. This necessitates that "said outer annular surface of said ear seal extends beyond said

flexible foam material along at least one annular surface of said ear seal.” Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 8** is limited to “the ear seal as claimed in claim 4,” as covered by Kim in view of Skulley. As seen in figure 9, the flexible foam material 78 is annular and therefore inherently comprises a radially inner and a radially outer annular surface. Furthermore, the foam material is completely (i.e. “intermediate”) sealed within a tube 77 that defines “a radially inner surface” and “a radially outer annular surface of said ear seal.” See paragraph 37. Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 9** is limited to “the ear seal as claimed in claim 1,” as covered by Kim in view of Skulley. As taught by Skulley, the “thermal storage material” 78 includes a “flexible foam material.” See column 1, line 66, through column 2, line 10. In addition, Skulley teaches protecting the material using a “protective cover” 77. See paragraph 37. Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 10** is limited to “an ear seal for use in a headset.” As seen in figure 4, an ear seal comprising elements 30, 70 and 80 are assembled to a headset including enclosure 20. The back surface of element 30 contacts enclosure 20, and therefore, corresponds to “an inner annular surface for contacting a headset.” The surfaces of 70 and 80 then contact the user’s head, and therefore, correspond to the “outer annular surface for contacting a user’s head.” Apropos the rejection of claims 1 and 4, it was shown that it would have been obvious to construct cool/warm pack 70 using phase change materials embedded within a “flexible foam matrix.” The phase change

materials corresponding to “thermal storage material capable of storing thermal energy as latent heat of phase change.” Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 11** is limited to “the ear seal as claimed in claim 10,” as covered by Kim in view of Skulley. With reference to Kim figure 10, a cover 90 is provided to wrap the medium 78 that contains the thermal storage medium. The cover 90 is either cotton or wool, and as such, corresponds to “a flexible sheath.” See paragraph 38. Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 12** is limited to “the ear seal as claimed in claim 10,” as covered by Kim in view of Skulley. With reference to figure 9 of Kim notice that the foam matrix 78 (as taught by Skulley) is slightly thinner in diameter than the outer shell 77. Now notice that in figure 4, the outer diameter of ring 70 is coplanar with the outer annular surface. This necessitates that “said flexible foam matrix material is inset from said outer annular surface of said ear seal.” Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 13** is limited to “the ear seal as claimed in claim 10,” as covered by Kim in view of Skulley. As seen in figure 9, the flexible foam material 78 is annular and therefore inherently comprises a radially inner and a radially outer annular surface. Furthermore, the foam material is completely (i.e. “intermediate”) sealed within a tube 77 that defines “a radially inner surface” and “a radially outer annular surface of said ear seal.” See paragraph 37. Therefore, Kim in view of Skulley makes obvious all limitations of the claim.



**Claim 14** is limited to “the ear seal as claimed in claim 13,” as covered by Kim in view of Skulley. As taught by Skulley, the “thermal storage material” 78 includes a “flexible foam material.” See column 1, line 66, through column 2, line 10. In addition, Skulley teaches protecting the material using a “protective cover” 77. See paragraph 37. Therefore, Kim in view of Skulley makes obvious all limitations of the claim.

**Claim 15** is limited to “the ear seal as claimed in claim 10,” as covered by Kim in view of Skulley. Figure 9 clearly indicates that the ring 70 is “relatively thin with respect to its width (i.e. diameter).” Therefore, Kim in view of Skulley anticipates all limitations of the claim.

**Claim 16** is limited to “an ear seal for use in a headset.” As shown above apropos the rejection of claim, 10 Kim depicts an assembly comprising elements 30, 70 and 80. The assembly is annular, and therefore, inherently has an “inner annular surface”, an “outer annular surface”, “an annular width” (which is different than general width, i.e. diameter) and an “annular thickness”. In the rejection of claim 10, it was noted that it would have been obvious to provide “a flexible foam matrix” with “a thermal storage material.” While the annular width of flexible foam material, illustrated in figure 9 as element 78, is about 75% of the annular width of the ear seal, the thickness of the flexible foam material appears greater than about 5% to 15% of the annular thickness of the ear seal. However, this deficiency is overcome by an obvious modification.

In particular, the applicant has failed to particular point out any nonobvious or unexpected results gained by limiting the thickness of the flexible foam material to about 5% and 15% of the annular thickness of the ear seal. As a matter of design choice, it

would have been obvious to one of ordinary skill in the art at the time of the invention to vary the width of the flexible foam material within the range claimed by the applicant as no nonobvious or unexpected results are expected to occur.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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